

ABSTRACT OF THE DISCLOSURE

10 A method of detecting nucleic acid fragments in plural samples is performed by the steps of: attaching an electroconductive label to nucleic acid fragments in one sample and attaching a different electroconductive label to nucleic acid fragments in another sample; preparing a
15 mixture of these samples; spotting the mixture on an electroconductive microarray having plural electrodes onto which probe molecules complementary to the nucleic acid fragments are fixed, so that hybridization between the nucleic acid fragments and the probe molecules on the electroconductive microarray can proceed to form hybrid structures; applying to the electrode an electric potential corresponding to the oxidation-reduction potential of the former label and detecting on the electrode an electric current; applying to the electrode an electric potential corresponding to the oxidation-reduction potential of the latter label and detecting on the electrode an electric current; and comparing the electric current detected in the former detecting procedure and that detected in the latter detecting procedure.